

Application 971053 filed March 7, 1997, and Norwegian Application 971054 filed March 7, 1997.

~~Background of the Invention~~ BACKGROUND OF THE INVENTION

The present invention relates to a tension member termination in accordance with ~~the preamble of claim 1~~ the claims.

The tension member according to the invention is intended for use primarily in connection with tension legs for a tension leg platform, but other applications are also relevant, such as in stays or wires for bridges (for example, suspension bridges or inclined strut bridges), anchoring of tunnels, or other uses where there is a need for a light and strong wire or stay. The invention is therefore not limited to the utilization described in detail in the following.

Tension leg platforms are widely used in drilling and production in oil fields where for various reasons it is not possible or economically justifiable to install a permanent platform, and where it would not be practical to use a floating platform anchored by means of anchors and anchor chains.

The tension leg platforms are in principle floating platforms where, however, instead of a slack anchoring with the aid of anchors and anchor chains, there are tension legs extending from the platform approximately vertically down to an anchor on the seabed. The tension legs are placed under a substantial degree of tension so that, to the extent possible, the platform will be maintained in the same position relative to the seabed. The platform's stable position is a great advantage in both drilling and production. However, this places high demands on the tension legs being used and on their attachment to the platform and their anchoring on the seabed.

Today's tension legs consist of steel tubing in sections. The sections may have unequal lengths, have unequal diameters, and exhibit various wall thicknesses, depending on the size of the platform and the depth of the water. The legs are always constructed as tubes having an air-filled cavity, so that the weight of the leg in the water is greatly reduced. This places a lighter load on the platform. The dimensioning of the leg in relation to external water pressure is therefore a design criterion. These steel legs function well at moderate depths, i.e., depths of a few hundred meters. However, oil and gas production now takes place at increasingly greater depths, possibly up to 2000